

Drought Monitoring Technical Committee Update

to the

Arizona Interagency Coordinating Group

May 9, 2017

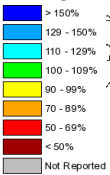
Nancy J. Selover
Arizona State Climate Office

Precipitation Comparison Colorado River Basin

WY 2011

Seasonal Precipitation, October 2010 - April 2011
(Averaged by Hydrologic Unit)

% Average

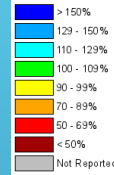


Prepared by
NOAA, National Weather Service
Colorado Basin River Forecast Center
Salt Lake City, Utah
www.cbrfc.noaa.gov

WY 2012

Seasonal Precipitation, October 2011 - April 2012
(Averaged by Hydrologic Unit)

% Average

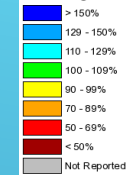


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WY 2013

Seasonal Precipitation, October 2012 - April 2013
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% Average

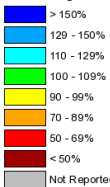


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WY 2014

Seasonal Precipitation, October 2013 - April 2014
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% Average

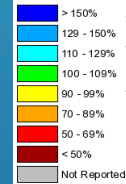


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WY 2015

Seasonal Precipitation, October 2014 - April 2015
(Averaged by Hydrologic Unit)

% Average

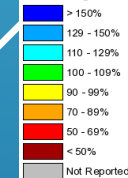


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WY 2016

Seasonal Precipitation, October 2015 - April 2016
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% Average



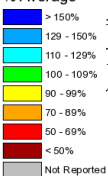
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Precipitation Comparison Colorado River Basin

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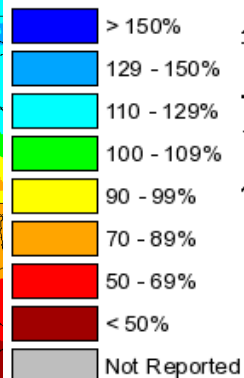


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WY 2017

Seasonal Precipitation, October 2016 - April 2017
(Averaged by Hydrologic Unit)

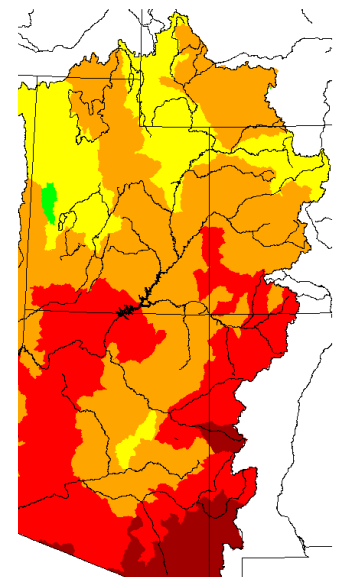
% Average



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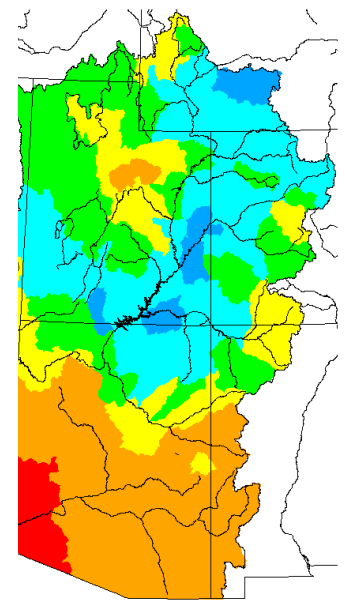
WY 2013

Seasonal Precipitation, October 2012 - April 2013



WY 2016

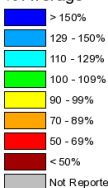
Seasonal Precipitation, October 2015 - April 2016



WY 2014

Seasonal Precipitation, October 2013 - April 2014
(Averaged by Hydrologic Unit)

% Average

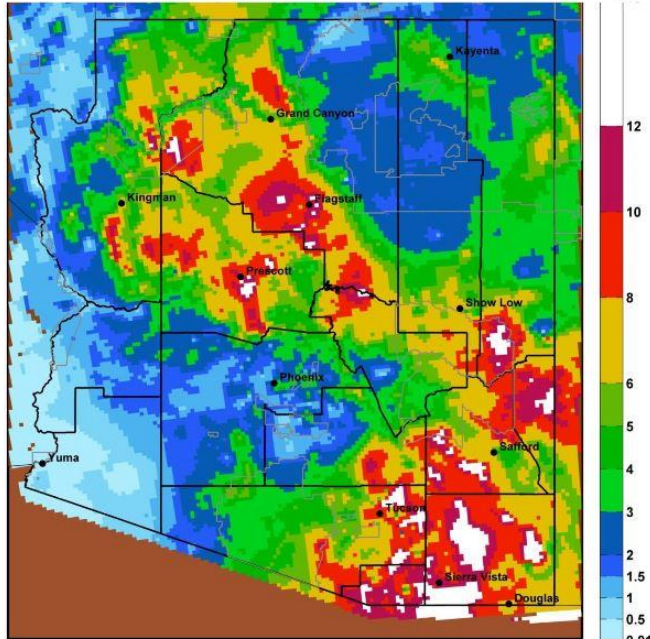


Prepared by
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Salt Lake City, Utah
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Precipitation Percent of Average

Monsoon 2016

Total Monsoon Rainfall (in)

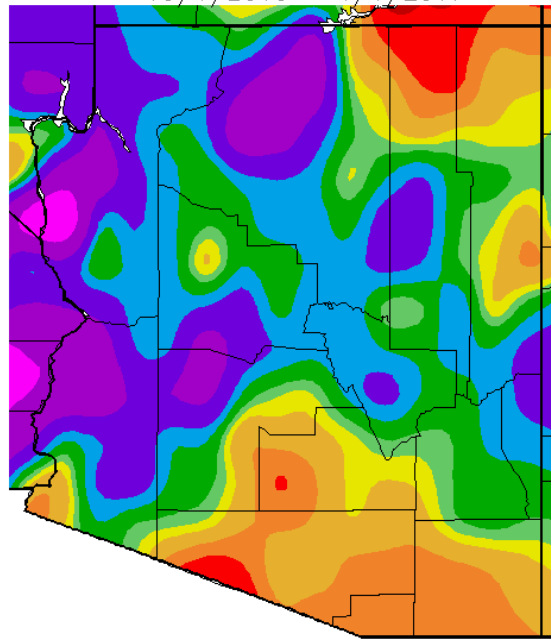


Map produced using daily total precipitation estimates from the NOAA National Weather Service Advanced Hydrologic Prediction Service (AHPS). Data information available at <http://water.weather.gov/precip/about.php>. Date created: 01-Oct-2016
University of Arizona - <http://cals.arizona.edu/climate/>



Oct-Dec 2016

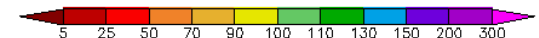
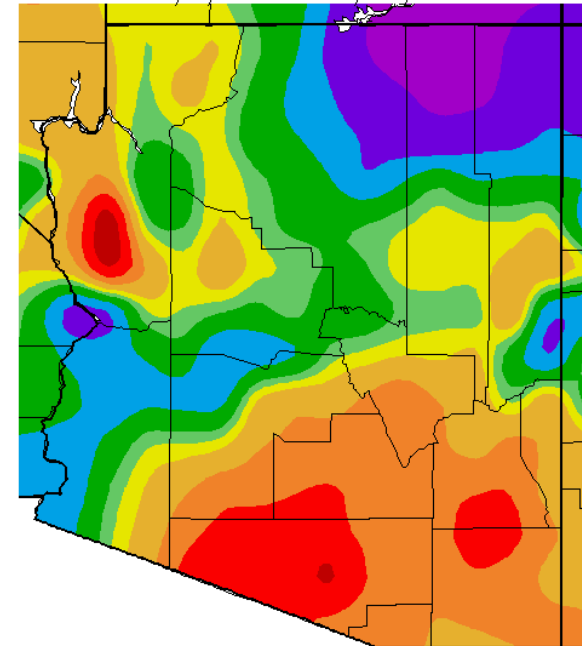
Percent of Average Precipitation (%)
10/1/2016 - 1/1/2017



Generated 1/02/2017 at WRCC using provisional data.
NOAA Regional Climate Centers

Jan-Apr 2017

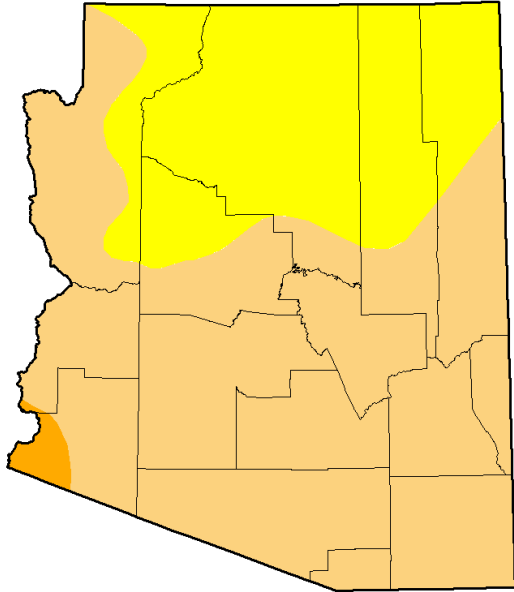
Percent of Average Precipitation (%)
1/1/2017 - 4/30/2017



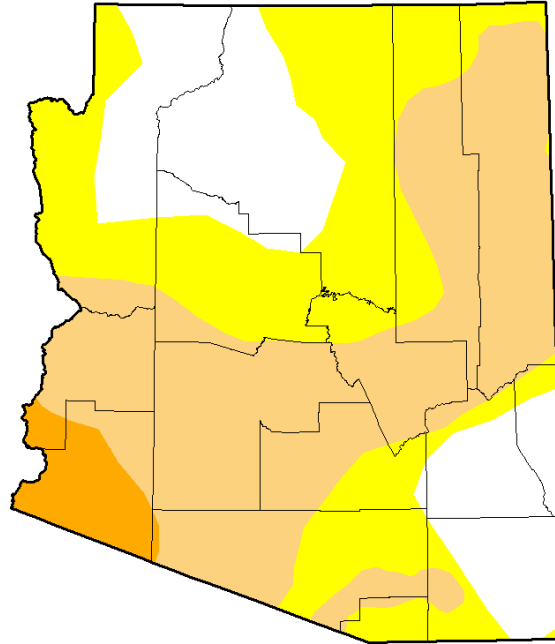
Generated 5/01/2017 at WRCC using provisional data.
NOAA Regional Climate Centers

National Drought Monitor Comparison (Short-Term)

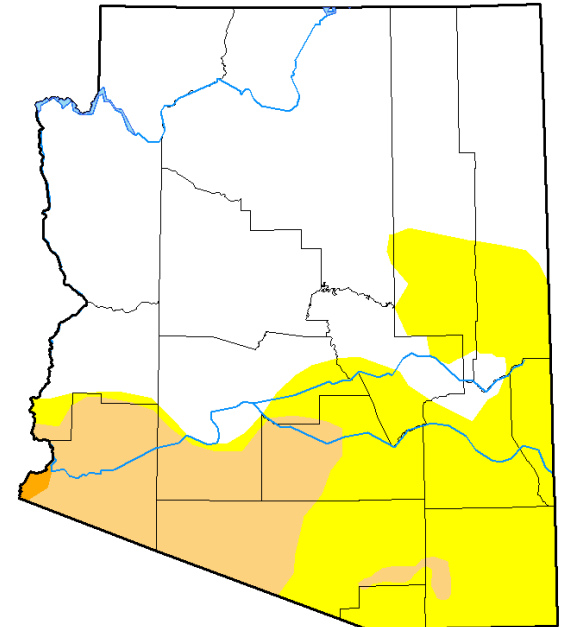
May 3, 2016



November 1, 2016



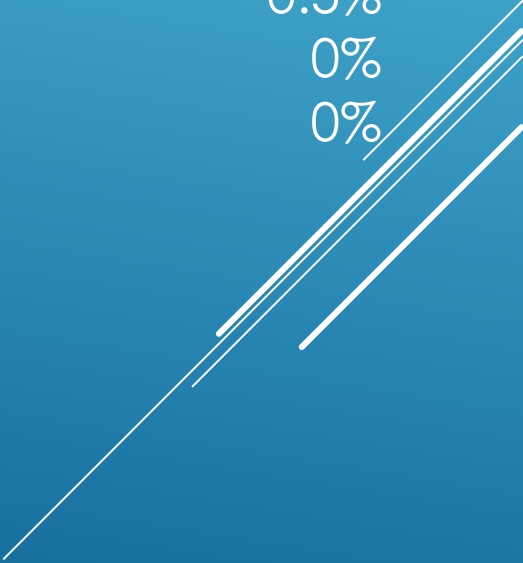
May 2, 2017



National Drought Monitor Comparison (Short-Term)

Percent of State in Drought

Category	May 3, 2016	Nov 1, 2016	May 2, 2017
No Drought	0%	23%	59%
Abnormally Dry	32%	28%	28%
Moderate Drought	65%	41%	13%
Severe Drought	1%	4%	0.5%
Extreme Drought	0%	0%	0%
Exceptional Drought	0%	0%	0%

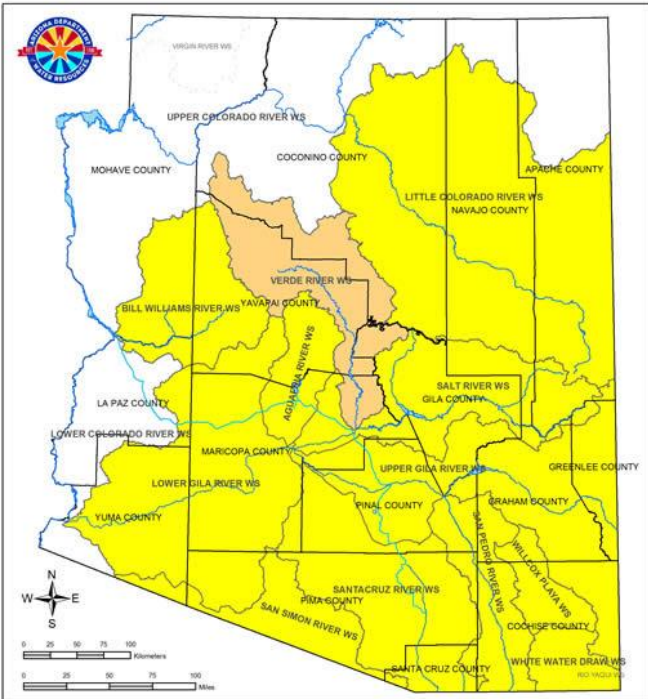


Long Term Drought Status Comparison

April 2016

October 2016

April 2017



April 2016 Long Term
Drought Status

Data Through March 31st, 2016

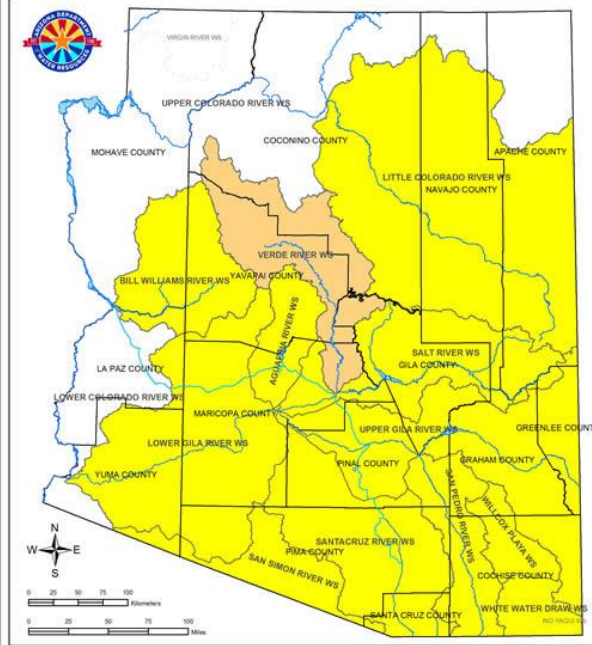
Arizona Drought Preparedness Plan
Monitoring Technical Committee

Watershed Drought Level**

- No Drought
- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

Counties
Lakes
Rivers
CAP Aqueduct
Merged Watershed*

* Watershed merged due to limited data
** As of January 2011, drought categories have been adjusted to be consistent with the U.S. Drought Monitor.



April 2016 Long Term
Drought Status

Data Through March 31st, 2016

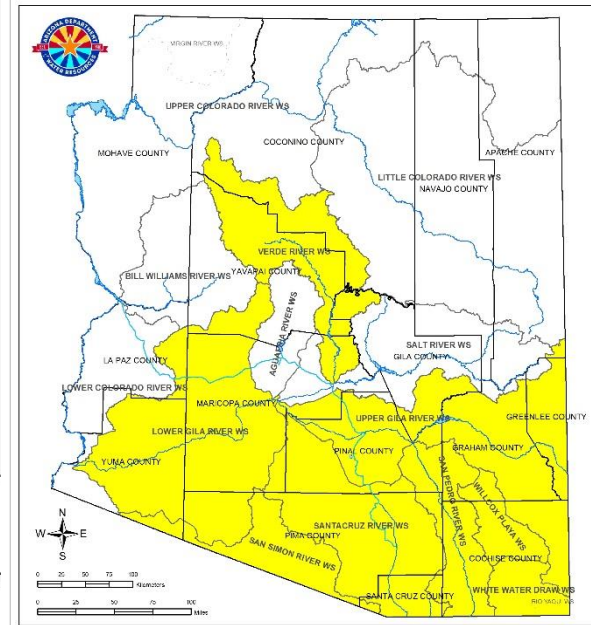
Watershed Drought Level**

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April 2017 Long Term
Drought Status

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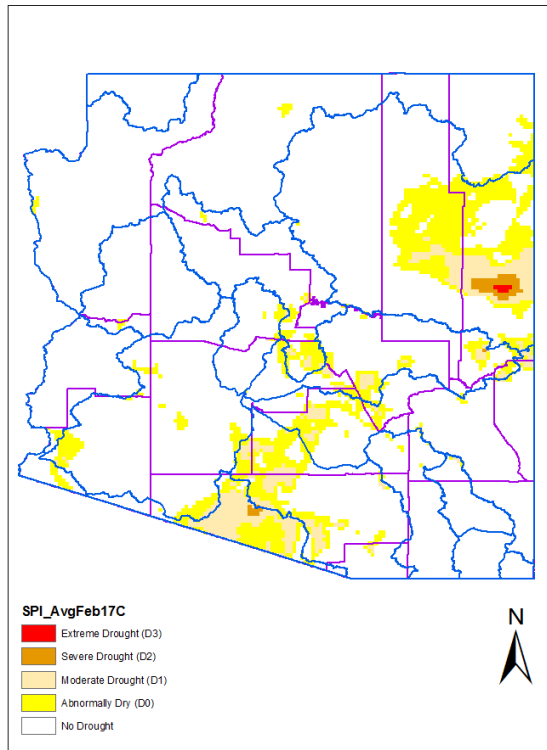
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Arizona Drought Preparedness Plan
Monitoring Technical Committee

Long Term Drought Status – Gridded SPI

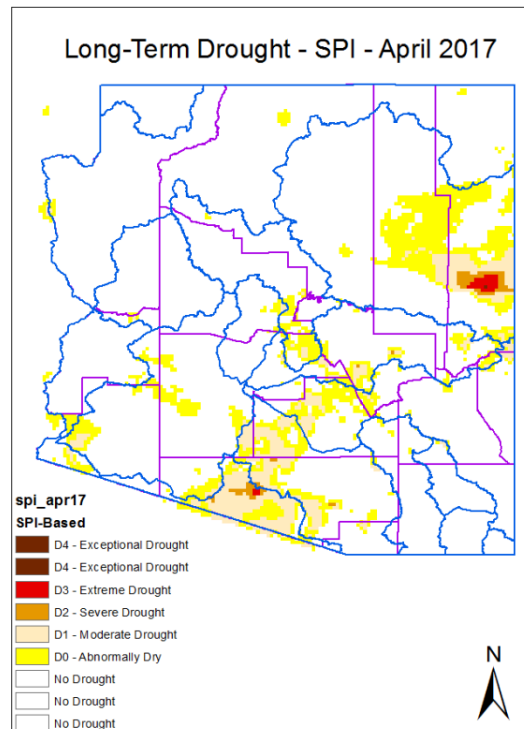
February 2017

Long-term Drought - SPI - February 2017



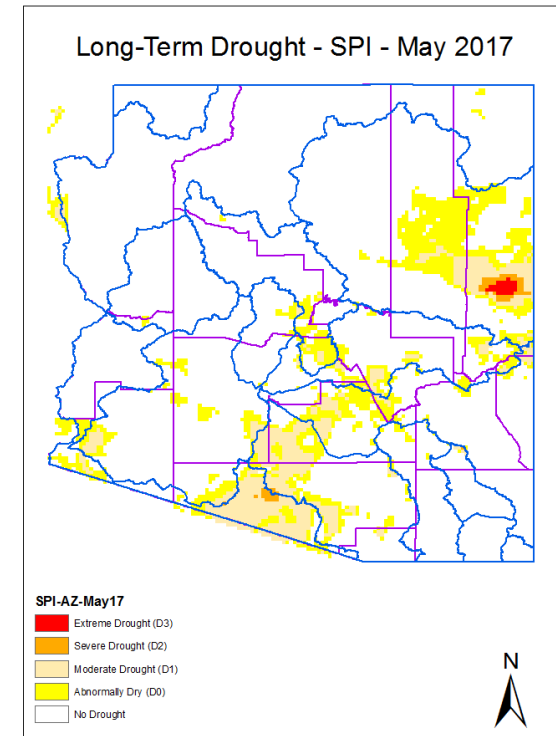
March 2017

Long-Term Drought - SPI - April 2017



April 2017

Long-Term Drought - SPI - May 2017

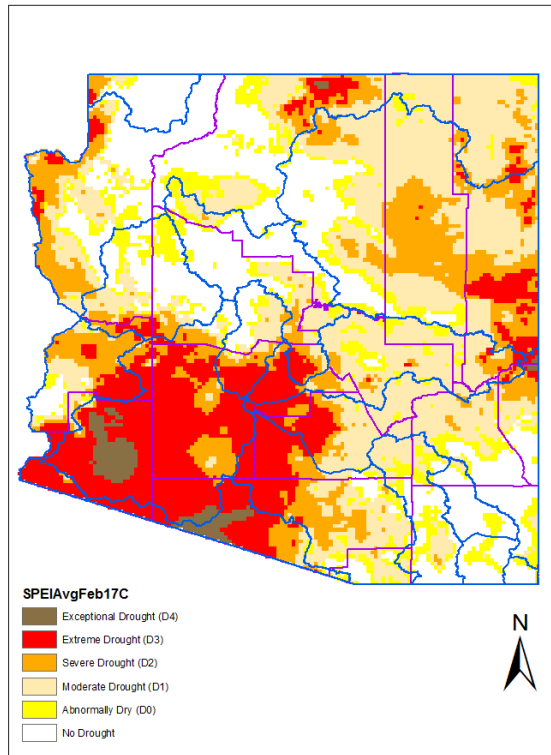


Based on average of 24-, 36-, and 48-month SPI

Long Term Drought Status – Gridded SPEI

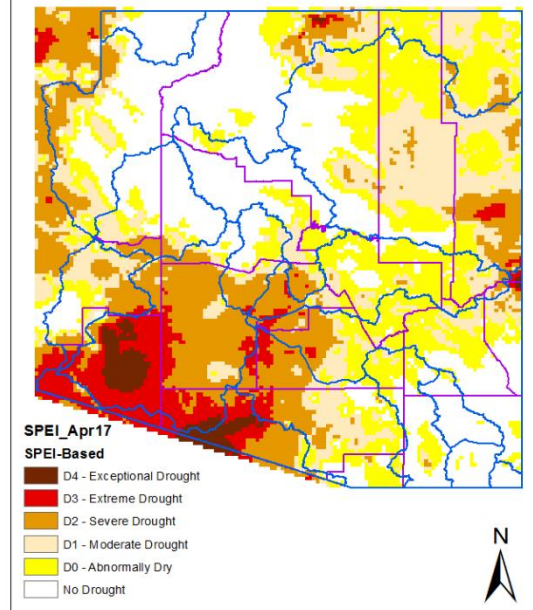
February 2017

Long-term Drought - SPEI - February 2017



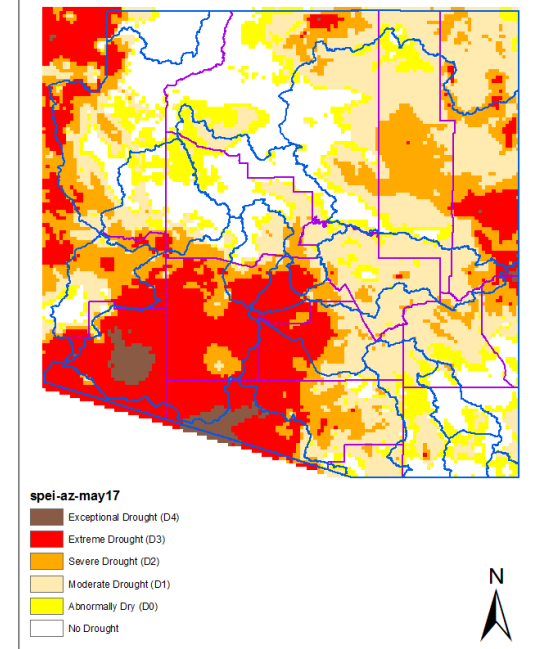
March 2017

Long-Term Drought - SPEI - April 2017



April 2017

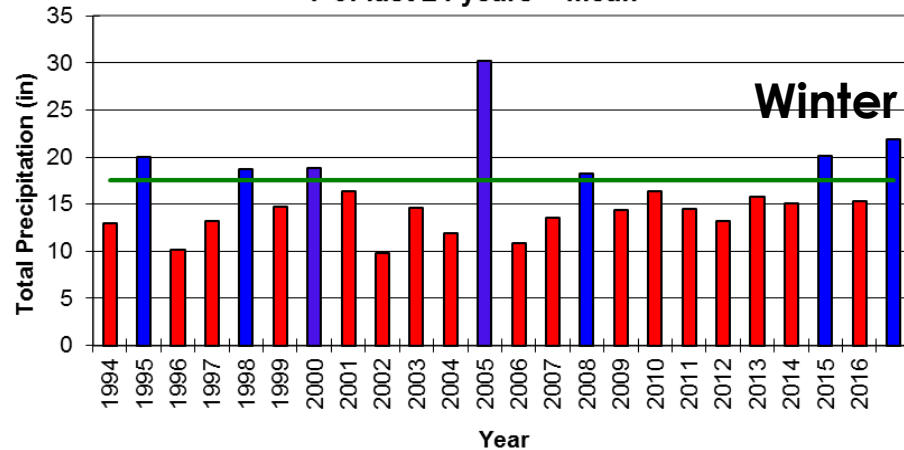
Long-Term Drought - SPEI - May 2017



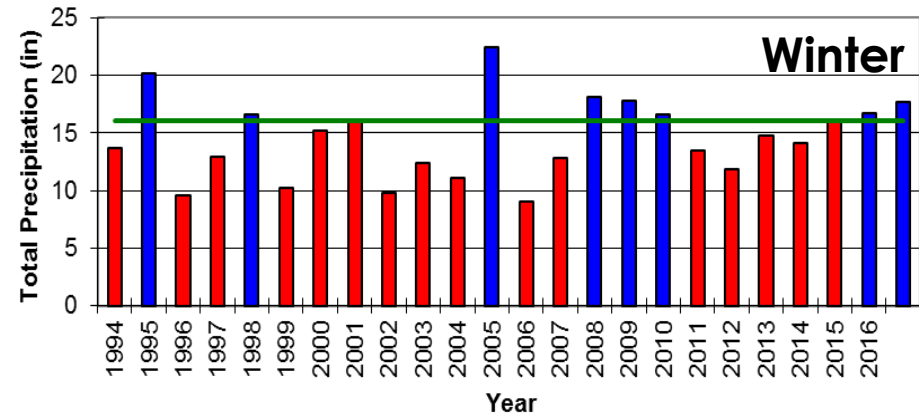
Based on average of 24-, 36-, and 48-month SPEI

Precipitation in Selected Watersheds for Past 23 Years

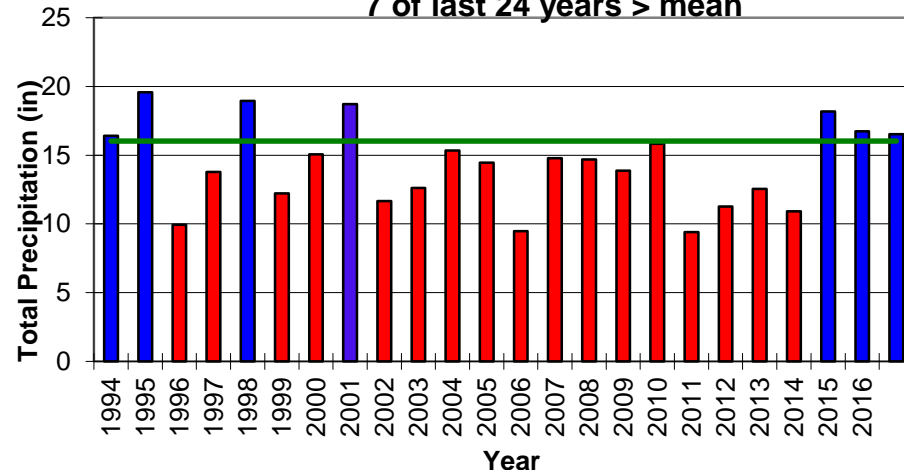
Verde Watershed 12-month Precipitation
(Apr-Mar) Mean 15.35"
7 of last 24 years > mean



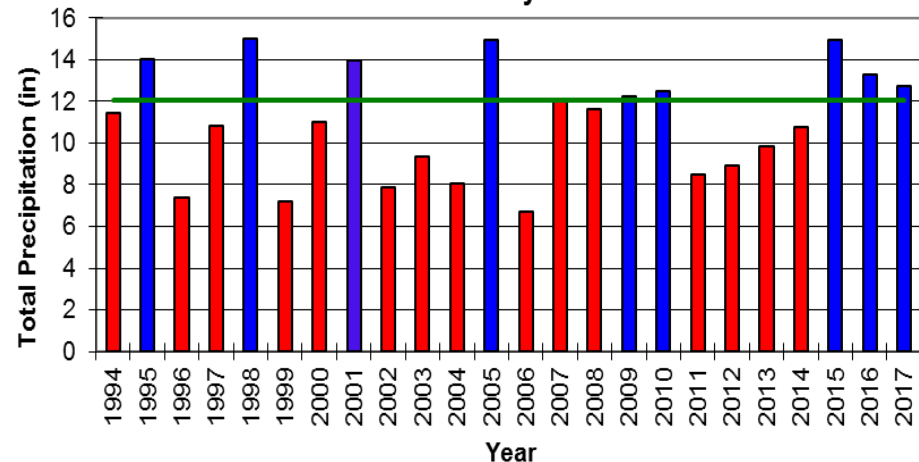
Salt Watershed 12-month Precipitation
(Apr-Mar) Mean 16.09"
8 of last 24 years > mean



Santa Cruz Watershed 12-month Precipitation
(Apr-Mar) Mean 16.03"
7 of last 24 years > mean



Upper Gila Watershed 12-month Precipitation
(Apr-Mar) Mean 12.06"
9 of last 24 years > mean



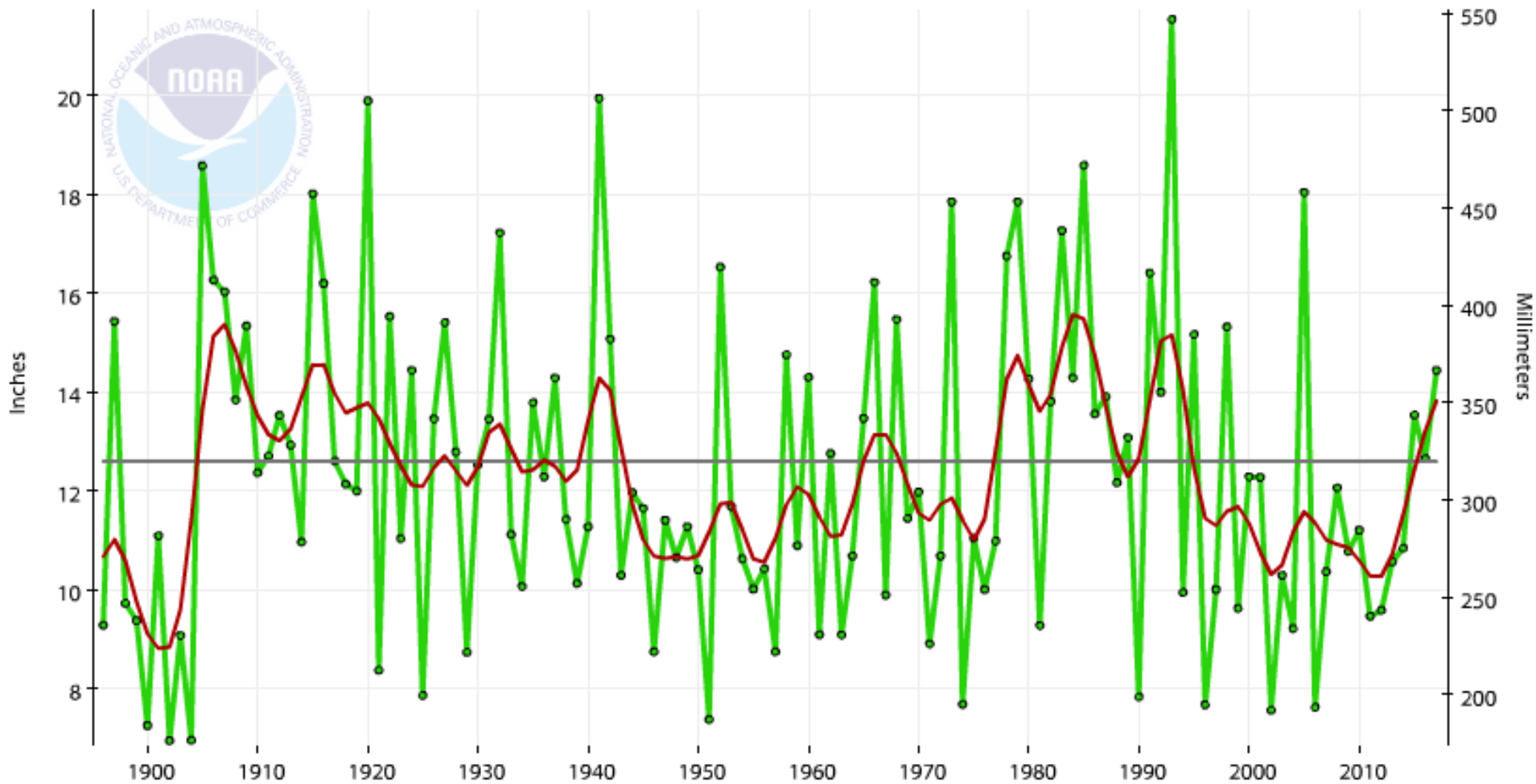
Monsoon

Monsoon

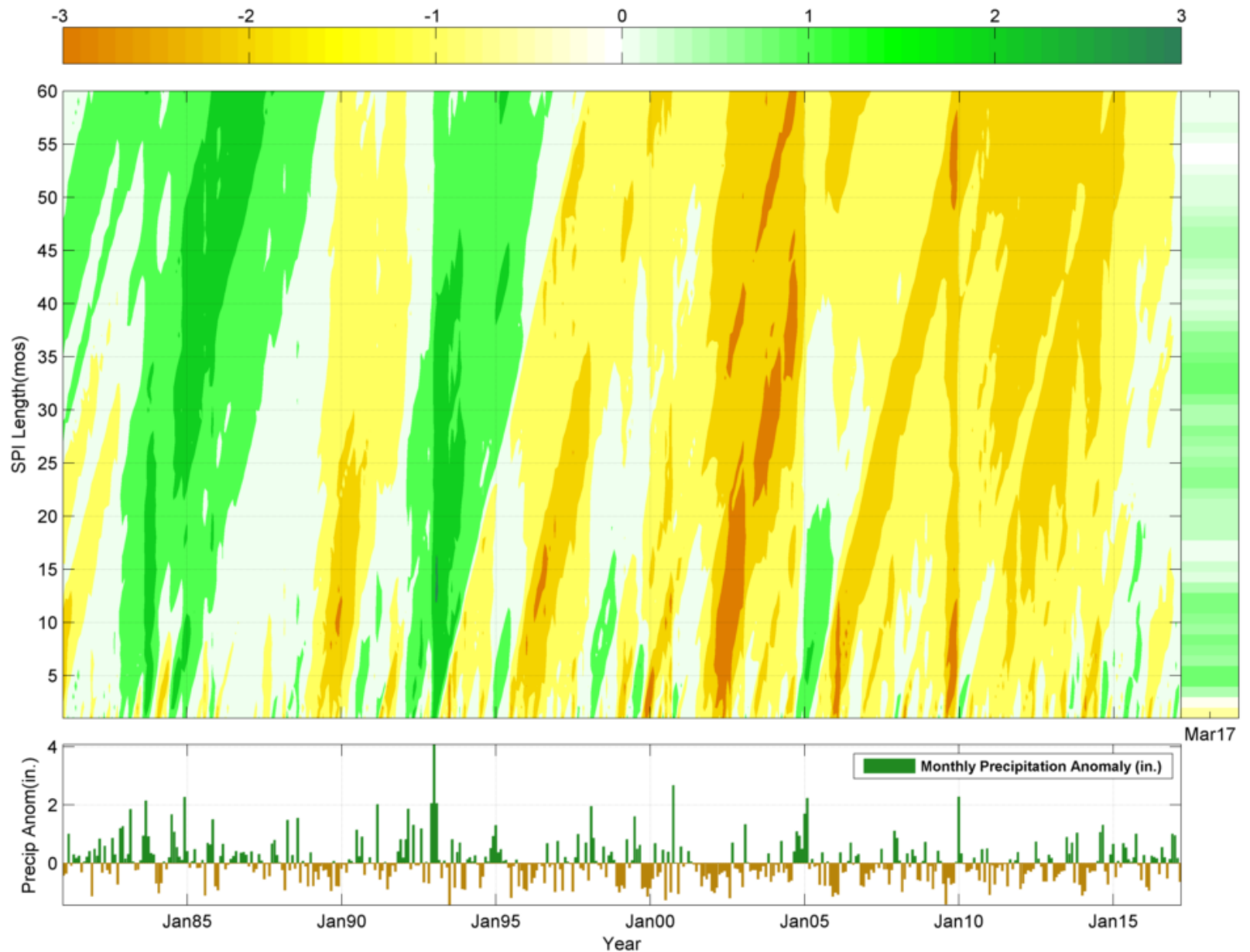
Long-Term Statewide Precipitation

Arizona, Precipitation, April-March

— Binomial Filter — 1901-2000 Mean: 12.61" ● Precip



Arizona - Standardized Precipitation Index - (1-60 mos, Jan1981 - Mar2017)



Questions ?

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Arizona State Climate Office
Arizona State University

480-965-0580
selover@asu.edu

<http://azclimate.asu.edu>